
TABLE OF CONTENTS

LIST OF FIGURES	
LIST OF TABLES	
LIST OF APPENDICES	
ACRONYMS AND ABBREVIATIONS	
PREFACE	
EXECUTIVE SUMMARY	
DWR REVIEW CHECK LIST	
1.0 INTRODUCTION	1-1
1.1 Urban Water Management Planning Act	1-3
1.2 IEUA's 2005 Urban Water Management Plan	1-3
1.3 DWR Guidance	1-3
1.4 IEUA History and Service Area	1-4
1.5 Climate	1-4
1.6 Retail Water Agencies within IEUA Service Area	1-5
1.7 Regional Water Agency Coordination	1-7
1.8 Coordination Actions	1-11
2.0 POPULATION, LAND USE AND WATER USE	2-1
2.1 Past Population and Water Use	2-1
2.2 Land Use Trends	2-2
2.3 Past Water Use	2-7
2.4 Per Capita Water Use	2-10
2.5 Future Population and Land Use	2-11
2.6 Future Demand without Additional Conservation	2-12
2.7 Future Demand with Additional Conservation	2-16
2.8 Future Water Demand Summary	2-18
3.0 WATER SUPPLIES	3-1
3.1 Historic Water Supply Trends	3-1
3.2 Past and Current Local Supplies	3-2
3.3 Current Imported Water Sources	3-12
3.4 Future Water Supply Strategy for IEUA's Service Area	3-14
3.5 Future Local Water Supplies	3-15
3.6 Future Imported Water Supplies	3-21
3.7 Future Water Supplies Summary	3-22
4.0 WATER CONSERVATION PROGRAM	4-1
4.1 Overview	4-1
4.2 Commitment to Conservation	4-1
4.3 Value of Conservation	4-1
4.4 Conservation Opportunities	4-3
4.5 Conservation Programs to Date	4-12
4.6 Conservation Programs 2005-2025	4-24
4.7 Action Plan	4-30
5.0 RECYCLED WATER PROGRAM	5-1
5.1 Overview	5-1

5.2	Regional Recycled Water Program.....	5-2
5.3	Wastewater Treatment	5-7
5.4	Wastewater Treatment Plants.....	5-7
5.5	Existing Recycled Water Program	5-11
5.6	Recycled Water Program in Development.....	5-15
5.7	Technical and Economic Feasibility of Serving Recycled Water.....	5-18
5.8	Encouraging Recycling Water Use	5-19
5.9	Recycled Water Price Incentives	5-20
5.10	Funding	5-21
6.0	REGIONAL GROUNDWATER MANAGEMENT PROGRAMS.....	6-1
6.1	Overview.....	6-1
6.2	Groundwater Sources	6-1
6.3	Description of the Chino Groundwater Basin.....	6-5
6.4	Management of the Chino Groundwater Basin.....	6-8
6.5	Chino Basin Groundwater Storage and Recovery Programs	6-12
6.6	Water Transfers.....	6-21
7.0	ALTERNATIVE WATER SUPPLIES.....	7-1
7.1	Overview	7-1
7.2	Groundwater Recover.....	7-2
7.3	Taking Recycled Water to the Next Level	7-4
7.4	Expanded Groundwater Storage	7-5
7.5	Enhanced Storm Water Management.....	7-6
7.6	Dual Plumbing for Gray Water Systems.....	7-8
8.0	WATER SHORTAGE CONTINGENCY PLAN	8-1
8.1	Water Surplus and Drought Management Plan	8-1
8.2	Emergency Drought Ordinances	8-3
8.3	Planning for a Catastrophe	8-7
8.4	Use of Dry Year Yield During Emergencies.....	8-7
8.5	Emergency Curtailment of Imported Water	8-7
9.0	WATER QUALITY IMPACTS ON RELIABILITY	9-1
9.1	Overview	9-1
9.2	Water Quality of Local Supplies	9-1
9.3	Chino Basin Groundwater Quality	9-3
9.4	Chino Basin Areas of Concern	9-10
9.5	Imported Water Quality.....	9-11
9.6	Summary of Water Quality Impacts.....	9-13
10.0	WATER SERVICE RELIABILITY	10-1
10.1	Reliability During a Drought.....	10-1
10.2	Water Agency Interconnections	10-13
10.3	MWD Service Line Capital Improvements.....	10-13
10.4	Mutual Aid Agreements	10-14
10.5	MWD Imported Water Reliability.....	10-14
11.0	UWMP ADOPTION AND IMPLEMENTATION.....	11-1
11.1	UWMP Adoption Process	11-1
11.2	2000 UWMP Conservation and Water Recycling Plan Implementation	11-2

LIST OF FIGURES

Figure 1-1	Location Map of Chino Basin	1-1
Figure 1-2	IEUA Boundary Map.....	1-2
Figure 1-3	Service Area and Facilities of the Chino Basin Water Conservation District.....	1-10
Figure 2-1	1995-2005 Population within IEUA's Service Area.....	2-1
Figure 2-2	Average Annual Population Growth in MWDSC's Service Area	2-2
Figure 2-3 a-d	1957-2001 Land Use Within the Chino Basin	2-5/2-6
Figure 2-4	1995-2005 Total Water Use within IEUA Service Area	2-7
Figure 2-5	Total Urban Water Demand By Sector of Use for 2000 & 2005	2-8
Figure 2-6	Population, Housing and Employment Projections for IEUA's Service Area	2-11
Figure 2-7	2000-2025 Projected Total Water Demand within IEUA's Service Area	2-13
Figure 2-8	Comparison of IEUA and MWD Projected Urban Demand Without Conservation	2-14
Figure 2-9	Total Urban Water Demand by Sector of Use for Years 2005 and 2025	2-16
Figure 2-10	Projected Water Demand w/ and w/o Conservation.....	2-18
Figure 3-1	Percentage of Full Service Imported Water from MWD out of Total Water Supplies.....	3-1
Figure 3-2	Total Water Supply within IEUA Service Area.....	3-3
Figure 3-3	Groundwater Use in IEUA Service Area.....	3-4
Figure 3-4	Chino Groundwater Basin and IEUA Service Area	3-6
Figure 3-5	MWD Service Area Map for Urban Use.....	3-13
Figure 3-6	Projected Full Service Imported Water Supply from MWD.....	3-16
Figure 3-7	Projected Water Supply Needed to Meet Urban Demand	3-22
Figure 4-1	Avoided Tier II Costs Due to Conservation (Dry Year).....	4-2
Figure 4-2	Percentage Household End Use of Water (indoor)	4-6
Figure 4-3	IEUA Service Area Indoor Water Use 1990-2010 and the Effect of Conservation Programs.....	4-7
Figure 4-4	Projected Savings in the IEUA Service Area from Proper Landscape Management	4-8
Figure 4-5	Projected Savings in the IEUA Service Area from Landscape Design Improvements.....	4-9
Figure 4-6	Water Conservation Savings Estimates	4-10
Figure 4-7	Historical Local vs. Outside Funding Sources	4-20
Figure 4-8	Example Drawing of a Rain Catching Garden.....	4-28
Figure 4-9	Energy Savings Associated with Water Conservation.....	4-29
Figure 5-1	Recycled Water Distribution Lines and Regional Plants	5-9
Figure 5-2	Projected Recycled Water Usage.....	5-17
Figure 6-1	Chino Groundwater Basin	6-2
Figure 6-2	Chino Groundwater Basin and Surrounding Basins	6-4
Figure 6-3	Chino Groundwater Basins with Management Zones	6-6
Figure 6-4	Chino Groundwater Basin with Priority Recharge Areas	6-7
Figure 6-5	Storage and Recovery in the Chino Basin.....	6-13
Figure 6-6	Locations of Chino Basin Recharge Facilities	6-14
Figure 6-7	Chino Basin Storm Runoff	6-16
Figure 9-1	Location of Groundwater Wells in Chino Basin	9-15
Figure 9-2	Total Dissolved Solids in Well water in Chino Basin	9-16
Figure 9-3	Nitrate-Nitrogen in Groundwater.....	9-17

Figure 9-4	Perchlorate in Groundwater	9-18
Figure 9-5	Tetrachloroethene in Groundwater.....	9-19
Figure 9-6	Dichloroethene in Groundwater.....	9-20
Figure 9-7	Cis-1,2-Dichloroethene in Groundwater	9-21
Figure 9-8	VOC Plumes in the Chino Basin.....	9-22
Figure 10-1	Multiple Dry-year Supply Capability & Projected Demands.....	10-16

LIST OF TABLES

Table 1-1	IEUA Service Area Climate	1-5
Table 1-2	Water Agencies within IEUA Service Area	1-6
Table 1-3	Regional Agencies Involved in UWMP Preparation	1-12
Table 2-1	1995-2005 Population by Communities within IEUA Service Area	2-3
Table 2-2	Land Use within the Chino Basin.....	2-4
Table 2-3	1995-2005 Water Demand by Retail Agencies & Agricultural Water Use Within IEUA's Service Area	2-9
Table 2-4	Per Capita Water Use within IEUA's Service Area.....	2-10
Table 2-5	Per Capita Water Use within MWDSC's Service Area	2-12
Table 2-6	Projected Population by Communities within IEUA's Service Area	2-13
Table 2-7	Water Demand Projection by Local Retail Agencies	2-15
Table 2-8	2000-2025 Projected Urban Water Demand with Conservation.....	2-17
Table 2-9	2000-2025 Per Capita Demands	2-17
Table 3-1	Total Water Production (AFY) by Source within IEUA Service Area	3-3
Table 3-2	Summary of Water Quality Data for Groundwater from Chino Basin January 1999 through June 2004	3-7
Table 3-3	Production of Chino Basin Groundwater (AFY) by Pool	3-9
Table 3-4	Groundwater Supply (AFY) from Other Basins used within IEUA Service Area	3-10
Table 3-5	Surface Water Supply (AFY within IEUA Service Area, FY 1995-2005	3-11
Table 3-6	Recycled Water Demand (AFY) within IEUA Service Area	3-12
Table 3-7	MWD Historical Water Purchases by IEUA	3-13
Table 3-8	Projected Urban Water Supply in IEUA Service Area by Source (AFY).....	3-14
Table 3-9	Projected Chino Basin Groundwater Production Used in IEUA Service Area (AFY).....	3-16
Table 3-10	Projected Chino Basin Desalter Water Supply (AFY).....	3-17
Table 3-11	Projected Other Basin Groundwater Supply in IEUA Service Area (AFY)	3-18
Table 3-12	Projected Surface Water Production Used in IEUA Service Area (AFY).....	3-18
Table 3-13	Projected Recycled Water Production Used in IEUA Service Area (AFY)	3-20
Table 3-14	Projected Imported Water Used in IEUA Service Area (AFY)	3-21
Table 3-15	Projected Urban Water Use by Agency (AFY)	3-22
Table 4-1	Minimum Annual Local Funding Needs.....	4-11
Table 4-2	List of Best Management Practices	4-15
Table 4-3	FY 2005/06 Regional Water Conservation Budget.....	4-19
Table 5-1	Capital Improvement Program for Recycled Water	5-3
Table 5-2	Potential Recycled Water Supplies	5-10
Table 5-3	Plant Supply vs. Recycled water Usage.....	5-12
Table 5-4	Current Recycled Water Users	5-12
Table 5-5	IEUA 2000 Recycled Water Use Projection for 2005 vs. Actual.....	5-15
Table 5-6	Projected Recycled Water Usage.....	5-17
Table 6-1	Chino Groundwater Basin Appropriative Pool Rights	6-9
Table 6-2	Chino Groundwater Basin Overlying Non-Agricultural Pool Rights	6-9
Table 6-3	Chino Basin Potential Water Recharge Capacities	6-17
Table 6-4	Estimated Chino Basin Groundwater Replenishment Values, AFY	6-19
Table 6-5	Participating Agencies DYY Shift Obligations	6-19
Table 7-1	Chino Basin Desalter Projected Expansion to Ultimate Production AFY of Product Water.....	7-3
Table 7-2	Gray Water Reuse of Landscape Irrigation (gallons per housing unit per day) Without Conservation	7-9

Table 8-1	MWD “WSDM” Plan Definition.....	8-1
Table 8-2	MWD Water Surplus and Drought Management (WSDM) Plan	8-2
Table 8-3	IEUA and Retail Agency Staged Actions	8-3
Table 8-4	Water Storage Contingency Plan Check List by Agency.....	8-4
Table 8-5	Drought Stage Definitions by Agency.....	8-5
Table 8-6	Local Agency Drought Ordinances.....	8-6
Table 9-1	Current Percentage of Urban Water Supplies within the IEUA Service Area	9-1
Table 10-1	Supply Reliability as Percentage of Normal Water Year Supply	10-1
Table 10-2	Basis of Water Year Data	10-1
Table 10-3	Projected Normal Year Water Supply (AFY)	10-2
Table 10-4	Projected Normal Year Water Demand (AFY).....	10-2
Table 10-5	Projected Normal Year Supply and Demand Comparison (AFY).....	10-3
Table 10-6	Participating agencies DYY Shift Obligations	10-4
Table 10-7	Projected Single Dry Year Water Supply (AFY)	10-6
Table 10-8	Projected Single Dry Year Water Demand (AFY).....	10-6
Table 10-9	Projected Single Dry Year Supply and Demand Comparison (AFY).....	10-6
Table 10-10	Projected Supply During Multiple Dry Year Period Ending in 2010 (AFY)	10-8
Table 10-11	Projected Demand During Multiple Dry Year Period Ending in 2010 (AFY)....	10-8
Table 10-12	Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2010 (AFY).....	10-8
Table 10-13	Projected Supply During Multiple Dry Year Period Ending in 2015 (AFY)	10-9
Table 10-14	Projected Demand During Multiple Dry Year Period Ending in 2015 (AFY)....	10-9
Table 10-15	Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2015 (AFY).....	10-9
Table 10-16	Projected Supply During Multiple Dry Year Period Ending in 2020 (AFY)	10-10
Table 10-17	Projected Demand During Multiple Dry Year Period Ending in 2020 (AFY)...	10-10
Table 10-18	Projected Supply and Demand Comparison During Multiple Period Ending in 2020 (AFY).....	10-10
Table 10-19	Projected Supply During Multiple Dry Year Period Ending in 2025 (AFY)	10-11
Table 10-20	Projected Demand During Multiple Dry Year Period Ending in 2025 (AFY)...	10-11
Table 10-21	Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2025 (AFY).....	10-11